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JACG NOTE

JULY 1987

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THE JERSEY ATARI COMPUTER GROUP

BBS
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EDITORIAL

Another DOS from ATARI? You've got to be kidding! From 1.0 to 2.0, 3.0 to 2.5 (a regression that was necessary!); and now ATARI has announced ADOS to accompany their new 5 1/4 inch XF 551 (single, enhanced and double density) drive. Announced at CES in Chicago, no firm release date was given (boy, is that a safe way to go about it...if I had a dollar for each missed introduction!). Well, Ca C'est La Vie!

If you read my Noise from Noyes last month, you probably expected something on ICD's Multi I/O board this month. Surprise...it is on its way back to Rockford, Il. Seems that not only does the spooler have the expected problems (due to a buggy ROM chip), but also has problems that were not expected. I will review the problem upon return of the unit. Blast or praise? That's up to ICD; for $199.95, I certainly hope that praise will be forthcoming!

Joseph Hicswa, a relatively new member of JACG, has volunteered to convert the question and answer period at the beginning of each meeting into a regular monthly Newsletter column; he needs a volunteer to record those questions and answers in a roughed-out fashion, and then provide them to him. Any volunteers? Only talking of 15 minutes a month. Please contact me if interested.

This is the sixth consecutive issue of the Newsletter that has been duplicated (as opposed to printed [as with ink]). I would be interested in your comments as to the continuation of duplication (it is approximately $200.00 less expensive for a 24 page issue). With the heavier front and rear covers, and the care (in reproduction) that the vendor has been utilizing, the gap in quality between the two methods is not wide. Comments, please!

J. B. Noyes

IN THIS ISSUE

MARK YOUR CALENDAR !!
JACG
Meeting Schedule

AUGUST 8, 1987

ATARI ST COMPUTER SYSTEMS

POWER WITHOUT THE PRICE

OVER-THE-COUNTER EXCHANGE
ON DOA DEFECTS
NINETY-DAY ATARI WARRANTY

68000 PROCESSOR — 8MHZ CLOCK — MIDI INTERFACE
SERIAL & PARALLEL PORTS — TOS OPERATING SYSTEM
WITH GEM — 640X400 MONO RES — 512 COLORS
640X200 COLOR RES

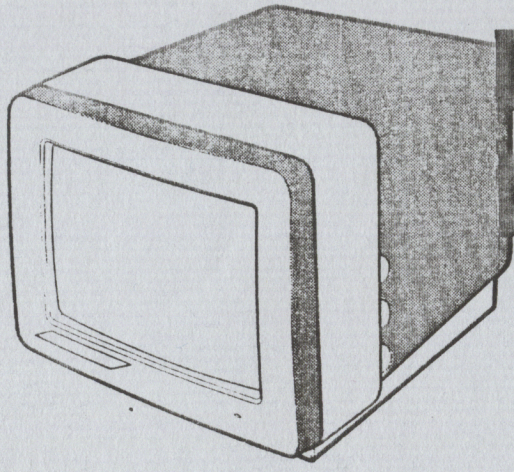
520ST 512K RAM CPU WITH
WITH MOUSE CONTROLLER AND TV OUTPUT

FREE
WITH SYSTEM PURCHASE-
BASIC LANGUAGE

1040ST 1.024 MEG RAM
WITH MOUSE CONTROLLER & BUILT-IN
DS, DD 3.5" DISK DRIVE

MONO SYSTEM $499.95

COLOR SYSTEM $699.95



MONO SYSTEM $699.95

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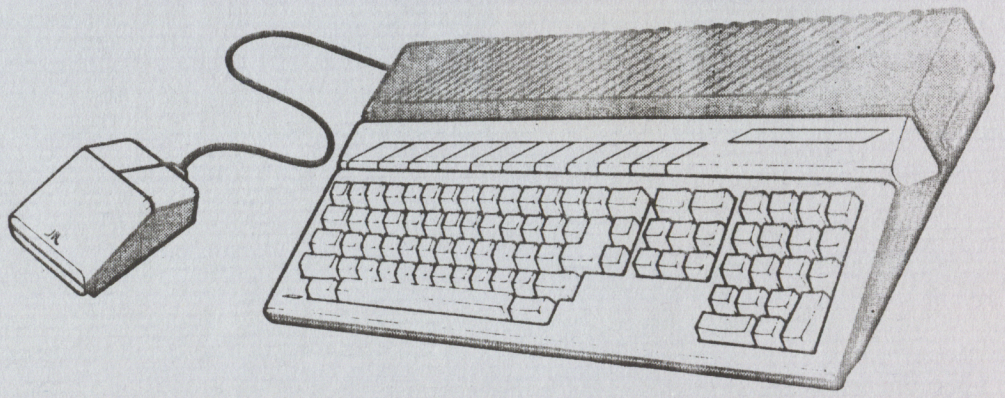
SYSTEM CONSISTS OF:
520ST CPU WITH MOUSE,
SF354 SS, DD DISK DRIVE &
SM124 MONO MONITOR OR
SC1224 COLOR MONITOR

SYSTEM CONSISTS OF:
1040ST CPU WITH BUILT-IN
DS, DD DISK DRIVE & MOUSE
SM124 MONO MONITOR OR
SC1224 COLOR MONITOR

SHD204 20 MEG HARD DRIVE	574.95
SF354 SS, DD DISK DRIVE	149.95
SF314 DS, DD DISK DRIVE	209.95
SM124 MONO MONITOR	159.95
SC1224 COLOR MONITOR	319.95
SMM804 DM PRINTER w/cable	189.95
SX212 300/1200 MODEM	89.95



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GEMINI ENTERPRISES

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CEDAR KNOLLS, NJ 07927

267-0988

YOUR ATARI CONNECTION

NEW SOFTWARE

E. Tomlinson - JACS

If you have visited a computer store recently, you may have noticed that there is not too much new software coming out for the Atari computers. You probably looked at the software available for some of the other computers, and wished there was an Atari version. Recently I have had the opportunity to try many of these programs, and I discovered that I really don't want Atari versions. While some of the programs were very good, a great number of them were very bad.

Maybe some examples will help illustrate my point. For the C64, you would probably feel as if you wasted your money if you bought Tag Team Wrestling or Breakthru by Data East. They also did horrible versions of Karate Champ and Karate Master for the Apple, and Commando for the IBM. Be happy that Accolade has not released Psi 5 Trading Company, or Desert Fox for the Atari. I would add Super Cycle, Sub Battle, and World's Greatest Football by Epyx, Ultimate Wizard by Electronic Arts, Quake Minus One, Lords Of Midnight, and all of the horrible text adventures by Mindscape to any list of bad programs. Star. Trek by Simon and Shuster, GFL Football, Web Dimension, and Titantic by Activision, and many of the Avalon Hill, Cosmi, and Artworx software are bad. Be happy you are using the Atari version of Paperclip, or that you don't have to choose among fast load cartridges for your Atari.

Of course this doesn't mean that all of the software for other computers is bad. I would love to see Atari versions of Gunship or Pirates by Microprose, Defender Of The Crown by Mindscape, or many of the excellent programs by Electronic Arts.

So the next time you visit a computer store and see an endless number of new software programs for the other computers, console yourself by thinking about how many must be bad!

MicroMod 3.0 by MicroMod Software

by Clint F. Fagg III

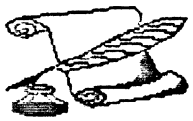
(Reprinted from the Jan. 1987 issueof HACE newsletter)

This is a very good piece of software for a small business that owns an Atari computer for such things as word processing. This would by a good program for an attorney who wants to do such things as time billing, or a small store that has one Atari set-up as a cash
egister and another set-up in the of the store for the bookkeeping station. This program is set-up at a remote location for invoicing, with the remote disk taken to the main station for updating. These invoices will be consolidated to a statement, which can show which individual invoices were paid and when. This will then adjust the inventory to show what items were sold. There is also a provision for items which are either delivered or scheduled for delivery. Then, periodically when an actual inventory is taken, the program will print out a listing showing what it thinks is in inventory against the computer listing and then adjust the listing so that the computer listing is correct. When requested, the computer will show any discrepancies in the actual inventory and the computer's projected, and will print out the differences. Then if you want a cost of goods sold statement it will print one out. However, you have to set-up the account listing by calling the necessary accounts using the spreadsheet program.

I think this is one of the best small business system designed for the Atari computer. The backbone of the program is the dated records handling. Through this feature, the program can do all the other things that I have told you about. If any of you have a small business and use the Atari for any of your business needs, then you might give this piece of software a chance. I was sorry to hear that they were raising the price to $149.95, but when you compare the suggested price of SynCalc, SynFile +, and AtariWriter +, it is close to $150.00 or more. Their word processor has a spelling checker included like AtariWriter +. This will also include what they call a cookbook approach to setting the program up and I think this would be a good improvement. Presently a weak point is the difficulty in setting up the program.

Finally, the best version of the program is SpartaDos because it has the largest records handling capacity for any of the following areas: payments/records, addresses, invoices, and inventory. However, you must have a copy of SpartaDos to have the other files necessary like XINIT, XCOPY, and the other files included in the Construction Set. Also, you have the documentation on how the DOS works, which MicroMiser does not cover in depth. The program has been updated to work with a hard drive or the new M10 box that IDC has introduced.

This program is good, but at the new higher price, I am leery of how well it will sell, but it was not my marketing decision to raise the price. It will still sell for the IBM. I hope that they are successful at marketing this software because this could give the Atari a good application program for the small business. The only problem is that the manufacturer is not marketing this through Atari dealers, because they are concerned with pirating. I think this may be a mistake because the dealers can sell the program better by demonstrating its features to the potential users. If I had not taken advantage of the demo disk for $5.00, I might not have pursued the program any further. Also, I am pleased to say how MicroMiser has continued to upgrade the program for the original price of $39.95. They have supported their customers very well.



FROM THE DESKTOP

by Linda Peckham

ST + Publishing Partner

Hi! This is the first of what hopefully will be a regular column in the newsletter. With the interest shown in Publishing Partner at several of the meetings this year, and a letter lamenting the paucity of ST articles, I thought, why not? This column will be devoted to desktop publishing on the ST, with particular emphasis on using Publishing Partner. It will include such things as news (release of fonts, clip-art, other desktop-related hardware and software), tips, and -- eventually -- a question and answer section. Now, on the latter: I'm no expert. (Don't have the time, worse luck.) So, any questions I can't answer, I'll print, and hopefully someone else will volunteer the information for the next newsletter. Articles for the column would be nice, too. If you want to drop me a note, I'm ...

Linda Peckham
917A Preakness Avenue
Wayne, NJ 07470
790-3061 (evenings)

Now, on to the good stuff!!

Fonts ... Fonts ... Fonts ...

What has been the biggest drawback to Publishing Partner, in its first half-year of existence? Why, the lack of fonts, of course! Only one font could be printed out with the original package, and a second 'pf1' (Normal) was included with the version 1.01 printer drivers. That situation is, however, beginning to change. For the brave of heart, there is the font editor (on ST disk #39). Several fonts have or will make their way into public domain: others will be available for purchase. If you have access to a Postscript (PS) laser printer, take note of the fact that there may be a difference in availability for PS fonts, versus dot-matrix 'printer' fonts. For the DM fonts, the following fonts are/will be available from Soft-Logik:

Public Domain Fonts:

Columbia (Available now, should be in the ST Disk Library)
Saturn, Hudson --availability?

For Sale:

Devoll, Thames, Spokane --availability?

Of the six PS versions of these fonts, however, only Saturn will be public domain. This is because Soft-Logik is licensing the PS fonts from Century Software, (so obviously, they can't afford to give them away!) Another source of fonts is from Font Factory in Arizona. Soft Logik is selling these disks for $29.95 + shipping:

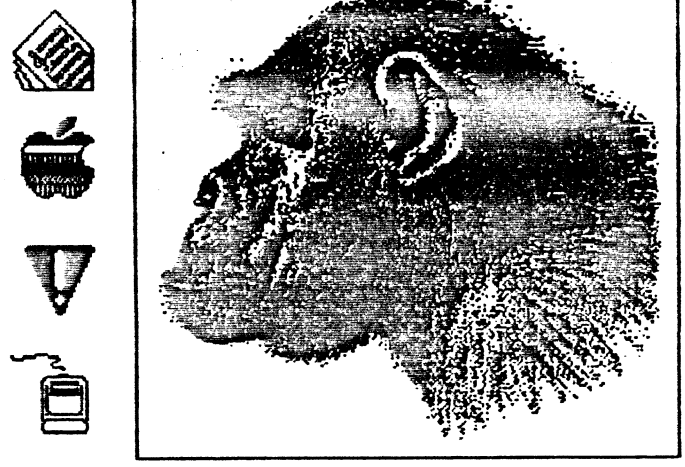
#1 -- Avant Garde Courier Calligraphy
#2 -- Helvetica Narrow Times 16-Bit
#3 -- Chancery Bookman Chicago
#4 -- Palatino Schoolbook Computer
#5 -- Symbols Dingbats 8-Bit

The first two are available now. (I've ordered them; hopefully the next column will have samples of the six fonts.) If you decide to order these fonts from Soft-Logik (instead of waiting on the distributor pipeline), take note --!-- Soft-Logik's address changed in April (but hasn't yet changed in their ads). The correct address is:

Soft Logik Corp.
11137 S. Town Square, Suite C
St.Louis, MO 63123

CLIP ART

Another drawback in the initial release of Publishing Partner is the lack of clip-art, (or, at least, good monochrome artwork) for those without inclination or time to do their own. Three clip-art disks are now available from Font-Factory (again through Soft-Logik) for $19.95 each. I have also down-loaded a group of six clipart files and sent those to Charlie Miller for the disk library. Those at the June meeting had a chance to see the printouts: several examples are scattered throughout this article. Also, for those with Print Master, disk #39 includes a program that converts three PM icons to a Degas.PI3 file. (See the header of this column for a sample.) The program is rather primitive, as yet, but the author plans to keep refining it, and eventually make it an accessory. Of course, those who have the money, can buy Computereyes (or Realitizer) and a video camera, and obtain images that way. Those of us who don't have that kind of money to spend are out of luck ... or are we ...?



The icons are from CLIPART3 and 4, the chimp is from CLIPART6. The image is printed at 83%, about 90 dots per inch. The printer is an Epson LQ-1000.

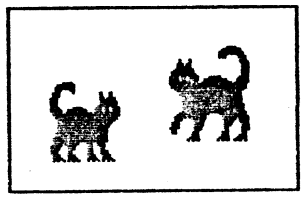
FROM THE DESKTOP (CONT.)

$100 IMAGE SCANNER COMING!

If you have $100 to spend, then you may soon be able to digitize any picture that can be rolled through a printer. Several months ago, word came out that a guy in Texas was making an image-scanner that would fit on top of a printhead, ala the Thunderscan for Macintosh computers. At that time, the price was $59.95. Finding out about the product, Soft-Logik contacted the designer, and ended up redoing the software. (According to Deron Kazmeier, the author of PP, the original software is a "kludge".) The new software was finished in late May, and the package returned to Texas. It should be released by the time you read this, for $99.95. Those who don't want to wait for the local stores to obtain the scanner, can send a card to the following address:

Seymor-Radix
P.O. Box 16055
Irving, Texas 75061

The word is not to send money: the package will be sent COD to those on the waiting list. Needless to say, yours truly is on that list!



The first picture is from some clip-art based on a Japanese animated film, printed at 42% original size. The second image is from CLIPART1.TNY in the library, and printed at 100%.

GEnie (Where It's At)

By this point in the column, you may be wondering where I've been getting all this (interesting?) information. The answer is GEnie -- General Electric Network for Information Exchange. If you are using Publishing Partner very much at all, and have a modem, you should seriously consider getting up on this service. It's less expensive than Compuserve (though unfortunately, it has fewer phone numbers), and is (in my opinion), easier to get around. Best of all, the Publishing Partner topic in the Atari ST bulletin board is the most active on the ST. (Over 540 messages as of this writing, and averaging 2-3 per day.) The author gets on and answers questions routinely, and all of the pd files I've made available to the JACG ST library have been downloaded from there. The ST Bulletin Board is divided into "Categories" and "Topics"; once you have gotten onto GEnie, you can read the messages by Moving to page 475:1, SETting the category to 13, and then REAding the message numbers in the desired topic (2 for Publishing Partner, 22 for Version 2 wishlists). WARNING: don't ask for "ALL" (or "NEW", if you've not been reading the messages regularly), unless you want to sit there at your computer for a *looong* time -- GEnie doesn't appear to have any graceful way to abort reading a topic, unless the SCROll is set to stop every page. (I always set it to SCR 0, since I use the Flash capture buffer.) The older messages have been arc'ed into the Libraries; Move to page 476:6, and download files numbers 2817,2818 and 2819.

Version 2

A version two of the program is definitely in the planning stages. Additions that are almost certain to be in the new version include improved hyphenation and kerning, the ability to group objects together and move them as a single entity, and retain text attributes (boldface, italics, etc) when importing text files from word-processors (STWriter, 1stWord), and auto text-flow around objects. GEM/GDOS compatibility, importation of non-ST picture formats (Macintosh & Amiga) and drawing files (from programs like EasyDraw) have also been mentioned.

Hints and Observations

•Did you know that there is an easy way to flip between any two views? Click the cursor on the little square in the lower-right-hand corner of the window, and the view changes to the last size you selected. Click again, and you're back to the original viewing size.

•The problem with sizing pictures is that when printing them, one can get unexpected patterns in shaded regions. What I would like to see in Version 2 is the ability to size a picture by "dots/inch", rather than by %. This would allow those with printers having the same number of dots across and down to size the picture so that there would be an even number of picture dots to printer dots. (IE, size all pictures at 90 or 180 dpi for 24-pin printers. Default is apparently 75 dpi (100%).)

•Has anyone tried to find a printing service that gives access to Postscript printers? Is anyone in the club using a laser printer? Is anyone planning on buying the Atari laser printer? (Manufacturing on those is supposed to have started the first of June, and they should hit the US in July, according to Neil Harris of Atari.) I'd like to get some feedback on those questions -- the first one in particular. Perhaps we should form a group to research the printers in north New Jersey, and try to sell some of them on the idea that they should support ST and Publishing Partner. What do you think?

Next Month: Font Factory Fonts and Clip-Art!!!!

H E L P

The JACG BBS Help File,
Long(er) Version, 6/30/87

This is the newly updated version of the JACG BBS Help File. Capture this file to disk, and print it out for future reference.

The structure of the JACG Bulletin Board System is subject to change without notice. In the future, look for separate Help files for each Menu on the BBS.

General Information

The JACG BBS is run on an Atari 520ST computer using BB/ST software by QMI, Inc. BB/ST is very flexible, which means that the system can be tailored to look exactly the way _we_ want it to. Therefore, if you have any suggestions for enhancements or improvements, please voice them!

Hitting your space bar or typing ctrl-S at any time causes the system to pause whatever it's printing so you can read it at your leisure. (Hitting any key will restart printing) <esc> or ctrl-C STOPS (cuts off) printing immediately and returns you to the nearest menu prompt.

Typing a question mark (?) at any menu prompt will give a list of commands for you to choose from. All commands are one letter, and you do NOT have to hit Return.

Typing a "Y" (Yell for Gary) at any menu prompt will page Gary Gorski. (The BBS is in Gary's house; Tom Shoosmith and Mark Knutsen are Remote SysOps.) If Gary is in, he may break in to "chat" with you online. If not, the system will give you a chance to leave him a Note. (Actually, all of the SysOps read the Notes.)

Typing a "G" (Goodbye) at any menu prompt will end your session on the BBS. You will be given the opportunity to leave a Note for Gary, and then will be asked if you really want to leave. If you say yes, the BBS will hang up on you. Please use this command to leave the BBS, do NOT hang up on the board yourself!

The "&" character (ampersand) is the Fast Logout command. Typing it at any menu prompt will end your session on the BBS immediately, no questions asked. Use with care!

If you ever receive a "<more>" prompt, hit Return to print ONE more line, or SPACE BAR to print another screen. Most <more> prompts can be turned off by selecting (V)iew Options from the Main Menu, and following instructions.

If you are asked a yes/no question, hitting just Return will select the capitalized default letter. For instance, if you were asked:

Do you understand now (Y/n)?

hitting Return would select "Yes." Some other questions that the BBS asks you give you a choice of letters to type (like A/b/c). The default is, again, capitalized.

The Bulletin Menu

You arrive here first, after you log on and give the system your password. You can also get here by typing "B" from the Main Menu. Type a number to read a bulletin, or "Q" to get to the Main Menu.

The Main Menu

This is the "center" of the BBS. From here you can get anywhere else on the board, and typing "Q" (for Quit to Main Menu) anywhere gets you back here. (If you're at the Main Menu already, typing "Q" does a Quick Message Scan, see below.) Some of the commands available from the Main Menu are:

C - Lets you see the names of the most recent callers of the BBS.

E - Lets you send private Electronic Mail to anyone on the BBS.

N - Lets you send a Note to Gary and the other SysOps.

R - Lets you read your Email. Also lets you read the Email you've sent to others, which you may delete.

T - Shows the current time and date.

U - Prints a list of all the users of the BBS. Use this list to find the correct spelling of a person's name, so that you can send him/her Email.

V - Presents a list of statistics about yourself, and then lets you change some options, like number of lines on your screen, number of columns, whether or not you want <more> prompts, etc.

The File Area

Here's where we keep all of the goodies! Hundreds of files are waiting in the File Area for you to choose from. To get to the File Area, type "F" from the Main Menu.

The files are grouped into several sub-areas by file type and computer type. The 8-bit areas are for Atari

400, 800, XL, and XE owners, and the 16-bit areas are for Atari ST owners. Use the "C" command to Change the sub-area you're in. The "L" command will let you List the files in the current sub-area, in either a short, concise format, or an expanded format with descriptions of each file.

Use the "D" command to download the file you want. You may refer to files by either name or number. You also have a choice of file transfer protocols: straight ASCII, Xmodem, Xmodem with CRCs, and Ymodem. To ensure error-free transmission, use Xmodem or Ymodem, whichever your terminal program supports.

You may also upload public-domain files to the BBS ("U" command). Doing so will gain you more time on the system, after the files are cleared for availability by the SysOps. Note, however, that bugs in the current version of BB/ST disallow uploads of greater than 256 blocks. This means that you cannot upload a file of length greater than 64K using Xmodem, or 256K using Ymodem. There will be a Bulletin when this bug is fixed.

The Message Area

Electronic Mail (Email) is for private messages, but the Message Tree is for public discussions, questions, advertisements, and much more. The Message Tree is probably the most confusing part of the BBS for first-time users, also. You get to the Message Area by typing "M" from the Main Menu prompt. From here, you can read messages linearly with the (R) command, or just read the new messages (that is, the messages you haven't read already) with the (N) command. Typing "Q" from the Main Menu is the same as typing "N" from the Message Area; it's a (Q)uick way to read the new messages as soon as you log onto the BBS.

To actually use the tree to find or post about a topic of interest, you must type numbers. As an example, let's suppose you want to tell people about the super new word processor (Deluxe WriteItAll) that you just bought for your Atari 65XE. First, you type "M" from the Main Menu. You are brought to the Message Area, and the Top of the Tree is shown. See the list of branches, each with a number in front of it? Naturally, you want to go to the "8-Bit Branch," so type the appropriate number (3, I believe), and hit Return. (Yes, this is the one place where you DO have to use Return...)

Now you are shown the 8-Bit Branch. There is probably a list of more branches here, too. These are the various conversations about 8-bit Ataris. You're going to start another one.

Type "E". The BBS asks, "Enter a message under '8-Bit Branch'?" Answer yes, and type your message! Hit <esc> (or three RETURNs) to finish, and then type "S" to Save (or "Q" to Quit without saving) your message on the Tree.

By the way, the title of your message can be up to about 100 characters long, so sometimes your entire message can conveniently fit in the title!

The Other BBS Menu

Get here by typing "O" from the Main Menu, then type "V" to view our growing list of other Bulletin Board Systems. Also check out the list of PC Pursuit-accessible BBSs; type "P".

If your favorite Bulletin Board System is not on the list, why not add it yourself? Use the "A" command, and give as much helpful information as you can. Be sure to add (PCP) to the BBS name if you know it's PC-Pursuit accessible.

The Polling Area

"V"ote in a Poll, or just "L"ook at the results. There are many public polls here on a variety of subjects. "P" from the Main Menu gets you here, and "Q", of course, gets you back.

----------End of Help File----------

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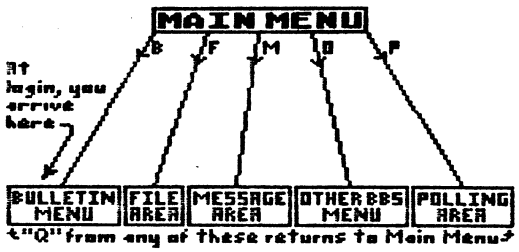
THE JACG BBS
BLOCK MENU DIAGRAM



PDG

Doug Van Hook - JACG

This article was written by FINAID author David Dvorin. FINAID was placed into our library quickly in response to members pointing out that we could use more business programs. The only thing missing from David's article is that a translator disk is needed to run this program. David has agreed to present the disk of the month, and also to explain the basic concepts of FINANCIAL PLANNING. It is a real thrill to introduce disk #123 because it was written by a member of JACG. I'm sure that many others in our group have written quality business software. Remember... UNCLE SAM CORY NEEDS YOU!

In the April 1983 issue of COMPUTE!, there appeared a program, VIDEO 80, that showed one of the most interesting facets of the Atari's flexibility and power; 80 column display through software. After spending the few hours required to type it in, I was amazed to see my Atari 800 show off 80 columns with the option of independently scrolling windows. Letting my imagination carry me further, I thought it was only a matter of time before an 'integrated' software package designed to take advantage of Mr. Charles Brannon's "80 column softcard" would appear on the pages of COMPUTE!. To my knowledge, nothing yet has been printed using this Atari 80 column display, so allow me to proudly present my application: FINAID.

The program consists of 8 subprograms that aid in financial decisions. The 8 subprograms find the:

(1) future value of an investment
(2) future value of regular deposits
(3) amount of regular deposits
(4) amount of regular withdrawals
(5) amount of initial investment
(6) amount of minimum investment
(7) nominal interest rate
(8) effective interest rate

Before using FINAID, you must have the VIDEO 80 program loaded into memory. This can done by the DOS option 'L' or by having VIDEO 80 in an AUTORUN.SYS file. It would prove convenient to save FINAID on the same disk as VIDEO 80. The program is crunched as much as possible to reduced the memory requirement to a minimum. When you RUN the program, 5 windows appear on the screen. Each window is numbered in the top left corner and serves a specific purpose.

Window [1] is the SELECTION PROGRAM window. This window shows the 8 subprograms available. Subprogram selection is from this window. Selection is performed with the [OPTION] and [SELECT] function keys. The first choice, FV of an Investment, is in inverse video. Pressing the [OPTION] function key changes the inverse video into normal video and changes the next choice, FV of Regular Deposits, into inverse video. Pressing the [SELECT] function key tells the computer that the choice in inverse video is the choice you wish to perform. Holding the [OPTION] function key will change the selection choice continuously and jump to the first choice after the bottom has been reached.

After [SELECT]ing the subprogram you wish to perform, window [2], the INFORMATION window, becomes the active window displaying input and output information about the subprogram you chose. Because no input is required by the user, no further expanation is needed about this window.

Window [3] becomes active as soon as the INFORMATION window finishes displaying its information. This window is the INPUT DATA window. Each input is trapped to avoid program crashes.

Window [4] is the RESULT window. This is where the results are displayed. This window becomes active as soon as the input is finished.

Window [5] is the WHERE TO NOW? window. Again by using the [SELECT] and [OPTION] function keys, you can either go back to the SELECTION window and start a new subprogram, or you can go back to the INPUT DATA window and re-work the same subprogram.

There are some limitations of the V: device I did not know how to overcome. First, as explained by Mr. Brannon in the VIDEO 80 article, "no fancy cursor controls here - backspace is the only editing key. The cursor appears only during INPUT." The problem being, I do not like relinquishing control over to BASIC for keyboard input, which is what happens with the INPUT statement. A GET input routine could be developed but the V: device would still not support the editting keys. (Even backspace would be gone with a GET routine.) Second, the RESULT window must be redrawn when printing to it because the box outline is removed with the corners defined as they are. Playing with the size of the window showed that the best solution was to simply redraw the RESULT window as opposed to leave part of it blanked out. You will see what I mean when you use this program.

There you have it. An application for the VIDEO 80 program. I hope you find FINAID useful.

FOR SALE

PROWRITER 8510A PRINTER "The Workhorse"

Includes original full documentation and the service manual plus the additional memory chip and special character documentation by "Leading Edge". Supports double column, and includes both tractor and single sheet feed. This is the same kind of printer that Frank Pazel used for over 30 of our prior newsletters. A local video store used one of these for receipts for two years and never had a problem. Supported by most software and interfaces. Like new, $175.00.

Please contact:
Bill Martin.....at the meeting or call (201) 534-6349 (leave message).

NOISE from NOYES

D. Noyes - JACS

With great fanfare, and with (as it turned out) even greater effort, The D. Noyes Computer Center has moved from the bedroom, to the dark, humid, buggy (and I don't mean the horse or horse-less type, or the software type) recesses of the Noyes basement. Tucked away in a corner, my equipment is guarded by a group of some of the vickedest looking spiders (and other crawling creatures) that I have ever set eyes upon (at least I won't be lonely!).

In true Noyes fashion, the move was neither easy, nor without incident. To begin with, we are talking TWO flights of stairs (thus FOUR stairways) per trip (loaded down with the accumulation of over three years of computing), the number of trips was somewhere between countless and infinite! Of course, prior to even moving down, there was the necessity to clear the required area (a 10,000 pound bomb and a back-hoe were sufficient). Eventually I was able to reconstruct the mess that was in the bedroom into a new mess in the basement...but that was only the beginning.

Computers do not work very well without power (granted, they don't require much power, but power they do require); therefore I wired ROMEX into an existing electrical fixture in order to provide the necessary kilowatts. Ready to start computing? No way! What about the telephone? Well, I had some spare six-conductor wire around (only needed two conductors, anyway)...should be a simple task. Well, at least it appeared simple. I have two lines (four leads) coming into the house. Do you realize the combinations and permutations that one can get into? Eventually our sixth telephone instrument is installed (a genuine BELL!) and I was able to hook up the modem. All set to go.

Well, not quite. It's a strange phenomenon, but when things are moved from one place to another...you know the story. Just as an example, it took me three hours this morning to find Don Forbes' article for this issue of the Newsletter! Well, with the hum of the de-humidifier, the whirr of the clothes dryer, and the clunk and slosh of the washing machine (all in the background), this is Dave Noyes signing off until next month; at which time I may have my Multi I/O Board back from ICD so that I can give it a proper review.

AVATEX 1200 MODIFICATION#1:

Color-Net BBS

PURPOSE: Add Hi-speed carrier detect to become 100% Hayes compatible

NOTICE:

**********DISCLAIMER**********

COLOR-NET TAKE NO-RESPONSIBILITYFOR ANY DAMAGE CAUSED BY THISMODIFICATION! IF DONE CORRECTLYTHIS MOD WILL WORK!

****

PARTS NEEDED:

1- MC1488 chip
Radio Shack #276-2520
(RS-232 driver)
2 feet of 20 gauge
hook-up wire

GETTING STARTED:

After opening up the modem..locate IC# U30 (located by the RS-232 connector). Take the new IC and fold-up all pins EXCEPT--#1,7, and 14!!! Now piggy-back the new IC onto IC #U30. Using a light wattage soldering gun, solder pins...#1, 7 and 14 of the new IC to pins...#1, 7 and 14 of IC #U30. Now take a wire from pin#2 of the new IC to pin#12 of IC #U23 (located just behind LED's). Now take a wire from pin#3 of the new IC to pin#12 of the RS-232 connector. Now take your wire to pins# 4,5,9,10, and 12 and solder all these pins together (we're making a heat-sink to keep the new chip from over heating). After you have soldered all these pins together, solder a wire from board ground (of the modem) to these pins! Thats it!! To test what you have just completed...take a piece of wire and ground the cathode end (banded side) of the HS LED, if all was done correctly...the HS LED should light, and with a VOM connected to pin #12 on the RS-232 connector, you should read about +8 volts or so. If you're not sure how to do this...you can mail me your modem along with a money-order for $25.00 to:

SYSOP (COLOR-NET)
P.O. BOX 2192
PETERSBURG, VA 23804

Be sure to send it by U.S. MAIL!!! UPS will NOT deliver to a P.O. BOX!!! We will make the mods, test it and send it back by return mail!

ATARI GRAPHS

by Donald Forbes - JACG

Perhaps you bought your Atari 800 as a game machine. But you can also use it for graphics charting and statistical analysis. All you need is a package with the proper statistical and analytic tools to evaluate data, and the ability to display the information in the form of a graph or chart.

The software you need is B/GRAPH from Batteries Included. I bought my copy from Bill Martin for $35 at the flea market at the June 1985 meeting (long before he became president and ex-president of JACG).

You will remember last September 13 at the Mountain Lakes High School that Oscar Grannison demoed B/GRAPH in his talk on "Graphics on the 8-bits."

The program consists of 10 integrated program modules and comes with 146 pages of documentation in the form of a set of nine tutorials. When you are done with your graphs, you can dump them all to your Epson printer.

B/GRAPH is menu driven. Here is the main menu:

1 Reset printer type
2 Graphing
3 Pie charts
4 Graph imaging/labeling
5 File manipulation
6 Statistical analysis
7 Regression analysis
8 Correlation analysis
9 Chi-square set up
10 Mini-DOS functions
11 Enhancement disk

If you invoke the first submenu, you have the choice of six printers:

1 Centronics
2 Epson/Gemini
3 C. Itoh/NEC
4 Seikosha AT/100
5 Okidata 92
6 Epson FX

Once you have made your initial choice, it is unlikely that you will ever want to return to this submenu. However, if you made the wrong choice or you want to change printers in the middle of a job, you can do so.

If you pick the second submenu, a GRAPH FUNCTION menu comes up.

1 Create a new graph
2 Update current file
3 Display a data file (load)
4 Redisplay current graph
5 Save graph data to disk
6 Image current graph to disk
7 Alter graph labels
8 Exit to program selection menu

If you pick the first submenu "Create a new graph" then you get the message:

"Graphs may display from 1 to 3 factors, each with from 2 to 100 data points. They may be labelled as (1) Months, (2) Years, (3) Units. Select 1, 2 or 3"

This message is followed with:

"Enter top title. Enter secondary title. Enter side title. Enter graph #"

On the new graph you have the option of placing a border around it, or just a right hand vertical border.

Next on the menu is the option "Update current file."

Instead of trying to create a new graph, we can experiment with a sample graph that is included with the package. From the main menu, invoke option "0" called Mini-DOS functions. You will be asked to load the second disk. The new menu becomes:

1. Format disk
2. Disk directory
3. Delete file
4. Rename file
5. Lock file
6. Unlock file
7. Return to main menu

If we invoke the disk directory, we get a listing of the files on the second disk:

AJAX	TIC	MENU	
ARM		NAPWARS	1
DEMOS	PIC	NAPWARS	2
CARS	STS	NAPWARS	3
CHI		REGRESS	
COMPUTER	FNT	PLANET	
CORR		POP	PIE
DEMO1	DAT	PICLOAD	BAS
MINDOS		RUSSIAN	FNT
EUROPEAN	FNT	STAT	
FANCY	FNT	WATERL	PIE
HEBREW	FNT	GREEK	FNT
INUIT	FNT	FONTROT	BAS
JOBS		SIDEATAR	FNT
KATAKANA	FNT		

What is on the first disk?

```
DOS      SYS      MENU
CHANGE            SHOW
DRAW              PIE
DUMPER            START
GRAPH             TXTLONG
```

Now that we know what is on the two disks, we can load the demo program on the second disk, called DEMO1.DAT. We bring up the graph module from disk one, and then load the demo from disk two. Up comes a "Tutorial Demo Graph" that we can use to do a number of experiments.

The demo graph plots six observations from Mar thru Aug as points. Hit the OPTION key to get to the GRAPH menu:

```
Create a new graph
Update current file
DIsplay a data file (load)
Redisplay current graph
Save graph data to disk
Image current graph to disk
Alter graph labels
Exit to program selection menu
```

By updating the current file, we can now choose to present the same data in several different ways. The menu to do this is:

```
SELECT DESIRED GRAPH
Line Point Bar Segmented bars
   Market (Tic/Connected)
```

We can display the data as a bar chart, or a segmented bar chart. If we choose a line graph, then there is a fill option, so that we can fill with color the spaces between one or more of our horizontal lines. You also have the capability of plotting stock market prices if you enter the data for the high, low and closing prices.

When you are ready to create your own graph, you are presented with a menu that asks you to:

```
Label factors as 1 Months 2 Years 3 Units
Enter 'top' title
Enter 'secondary' title
Enter 'side' title
Enter graph #
```

You can enter your choices, and then modify them as you wish if you should change your mind.

The next demo is a pie chart. Load the pie chart routine and then bring up the demo program POP.PIE. Here is pie chart labelled: 1979 World Census -- Too many people. You learn that Asia has 61% of the total, Europe 12, Africa 11, N. America 9, S. America 6 and Oceania less than 1%. You can modify this chart, or create another one like it.

You have the option of saving your graph to disk as a image, in the form of a high resolution picture file rather than a data file. Once you have saved these images, you can label them with a number of fancy fonts and custom character sets.

You have a choice of:
COMPUTER: a 'high tech' typeface
FANCY: an elegant type style
EUROPEAN: their special characters
GREEK: for science, math & statistics
HEBREW: the Hebrew alphabet
RUSSIAN: the Cyrillic alphabet
UNUIT: Eskimo script (for Canadians?!)
KATAKANA: Japanese script
SIDEATAR: The Atari font, sideways

The next module allows you to do file manipulation: alter your data, add factors from another file, or alter the order of the factors in a file. Here is the File Manipulation Function Menu:

```
Load a file for manipulation
Save graph data to disk
Exponential smoothing
Moving average of a factor
Geometric moving average
Factor rollover
Perform algebraic operations
Not-applicable data estimates
Change order of factors
Decrease number of factors
Insert factor from another graph
Visicalc D.I.F. conversion
ASCII file conversion
Browse data in memory
Return to main menu
```

B/GRAPH gives you all these capabilities to display your data. There is also an impressive set of tools for data analysis. The first one is the Statistics Function Menu:

```
Load a data file
T-test
F-test
Chi square test
Normal distribution probability
Poisson distribution probability
Binomial distribution probability
Standard statistics
Review data in memory (browse)
Exit to program selection menu
```

If some of these functions are unfamiliar, the documentation gives a clear (if brief) description of all of them.

There is another package to do regression analysis (by fitting a mathematical curve to a set of data points). Here is the Regression Function Menu:

Do a regression on data file
Change regression curve
Plot a function
Value interpolation
Redisplay current graph
Save data to disk
Image current graph to disk
Exit to program selection menu

The last program in the B/GRAPH statistical package lets you test the correlation between two factors. Here is the Correlation Function Menu:

Load a data file
Rank correlation (Spearman)
Simple correlation
Exit to program selection menu

To test these statistics program, B/GRAPH also provides you with a number of data files:

PLANET gives you the distances and orbital velocities of the planets from Mars to Pluto.
ARM gives you world spending for arms and foreign aid from 1960 to 1979.
WATERL.PIE is a pie chart of French and Allied casualties at Waterloo.
NAPWARS.1, 2, & 3 give casualties for battles in the Napoleonic wars -- where more than 1,000,000 soldiers were killed.
JOBS is the twenty year trend in the number of military personnel, teachers and doctors in the world (more than 57 million).

If you are not impressed, you should be!

F L A S H

R. Kovacs - JACG

Common Questions and Answers about FLASH terminal program.

1. I have a touch tone line. How do I tell FLASH to dial using touchtone?

Answer: Go to the menu-bar and select DIAL DIRECTORY from the EDIT section. Click on the button that says 'ALTER SETTINGS' and change the Prefixto ATDT. Then hit return to exit the dialog and select SAVE from the FILE section. When the File Selection dialog box appears, click on"Configuration" and save the configuration as the default name FLASH.CNF. This makes sure that the dialer prefix will stay as ATDT the next time FLASHis run.

2. I'm trying to upload a message to CompuServe using Ascii upload but the text appears scrambled and there are missing characters.

Answer: Change the ASCII upload setting to set METERING on. If you are using the SIG editor that gives you line numbers, then set PROMPTING on and enter ':' as the prompt character.

3. All of a sudden the cursor is moving on the screen, but I can't see any text being displayed. What's happened and what can I do to fix it?

Answer: Line noise has resulted in FLASH being sent an escape sequence that has changed the text color to the white. The same error can cause text and background colors to become reversed. If you are using a color monitor then you may see strange combinations of text and background color (e.g. red text on a black background). The solution is to use the MODE command to reset the terminal emulation mode. Press on ALT-M and hit enter. This will reset the colors to their default values while leaving the terminal emulation type unchanged.

4. While uploading or downloading a file using Xmodem I see error messages on the bottom line of the screen. Does this mean the file transfer was bad?

Answer: Xmodem is very good at recovering from errors due to line noise and it's quite normal to see occasional error messages such as Checksum error or Sector number error. If a fatal error occurs, FLASH will always put a message on the bottom of the screen which includes the phrase 'Xmodem Aborted'. In addition, the other computer will usually realize that a fatal error occurred and also display an error message. FLASH will typically try at least ten times to send/recieve each block of the file before giving up.

5. How do I edit the FLASH DO files?

Answer: Simple! Just load them into the FLASH capture buffer and edit them in place; then save them back to disk. To embed control codes in a DOfile, simply hold down the control key and press the appropriate key, (e.g.control-C shows up as an arrow facing right). To load a file into the FLASH capture buffer, select LOAD from the FILE heading of the menu bar and select CAPTURE from the dialog box that appears. To save the entire capture buffer, select SAVE from the FILE heading of the menu bar and click on the CAPTURE box. You can save just a part of the capture buffer by marking out a block and saving it. The block commands are all under the BLOCK heading of the menu bar. If you want to load in a DO file for editing without clearing out all the other text in the capture buffer, select MERGE from the FILE heading of the menu bar and then select the filename to merge into the buffer. You can then edit that file and, after marking it as a block, save it back to disk using the SAVE BLOCK option under the BLOCK heading of the menu bar.

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THE STAR MICRONICS' NX-10

N. Van Oost Jr. - JACG

Although my Centronics 739 is still chugging along, I just went out and bought an NX-10. The reason, super graphics and great print. My shopping was done at the Meadowlands Computer Show. Prices were competitive, and ranged from $229 to $189. Towards the middle of the show most dealers tried to match the $189 price. The Centronics to Atari 850 cable was obtained from an other dealer for $10.

Naturally I couldn't wait to get the box open and start printing. The box contained a sheet on unpacking your printer. I highly advise reading this first, as it tells of the three shipping spacers which have to be removed before you power up. Also enclosed were a manual, 239 pages and a plastic user's guide for the control panel operation.

The front panel controls consist of; ONLINE, PAPER FEED, MODE, BOLD, and power indicator. The power indicator glows orange when the power is on or blinks when the printer is out of paper or some other error occurs. The bold key and indicator selects boldface printing. The draft indicators (80,96,136) - glows green to indicate the number of characters per line when the printer is in the draft mode.(set by the Mode key). NQL indicator glows green when the printer is printing in Near Letter Quality mode (set by the Mode key). Paper feed key advances the paper one line at a time(On-line indicator off) and consecutive lines when held down. Online key and indicator sends a signal to the computer when it can or cannot accept data.

Features available during Off-Line after power up are; Micro-feeding, forward and reverse, Form-feeding, and Margin setting. Features available while turning on the power are; Self test (2 different), Hex dump mode, Panel mode, Italic mode, and Italic panel mode.

The printer has a easy to install ribbon cartridge which sells in the $8.00 range. Both pin and tractor feed are standard. If you are one of those persons, like me, who use mostly single sheets in their printer, you'll fall in love with the Automatic Paper Loader. Just set the sheet on the tray and move the release lever to the front most position and BINGO you sheet is loaded.

Under the ribbon on the left are two sets of DIP switches, so you can match your printer to your computer. Some functions are; Enable download characters, 8 different international character sets, standard and IBM mode, page length, paper length, and auto linefeed with carriage return. ▶

The User's Manual is well written, with many examples to help you get the most out of your printer. There's not much more that I can say in praise of the NX-10, except I compared a NLQ letter I printed against the print from one of the IBM Selectric's at work and it was hard to tell which one was the STAR.

A MOMENT SAVED IS A ....

W. Martin- JACG Inc.

If you are anything like me, you have about 2000 programs with documentation stored in 20 or so binders. Ever since I bought a computer in 1983, I have become rather ordered and logical in my thinking. Within moments, I can put my hands on the necessary documentation because I have logically stored the information. Makes sense!

Now that I'm logical, I've discovered that I'm also lazy. It's an effort to stand up and get the binder down from the top shelf just to run one little program that I downloaded from Compuserve.

Usually that documentation is just a page or two so I set up an Atariwriter file called DISKDOC. DISKDOC is a pre-formatted file to which I append the documentation. I use the following settings and print out a strip of condensed font that folds up and fits right in the disk envelope. Whenever I run the file, the documentation is "at hand". Here are the default settings that I use on my Prowriter:

```
Control G2    sets condensed font.
Control L20   sets left margin at 20.
Control R60   sets right margin at 60.
Control D1    sets paragraph spacing at 1.
Control J1    sets right justification.
Control S1    sets spacing at 1.
```

I then type in one line that says "Disk documentation dummy file" and save it. Whenever I want to print out a set of documentation, I load DISKDOC and then use the OPTION L sequence to append my existing file onto the DISKDOC file and send it to the printer. No fuss, no muss and the information is always at hand.

MODIFICATIONS TO THE JACG PRINT SHOP UTILITY

W. Martin - JACG INC.
Revised: September, 1986.

Since Tom Pazel finished the Print Shop Utility program last May, some of our members have made some changes that may be of value to you. I retyped them from our newsletter so if there are any bugs, I'm sorry. Since I don't have these printers, I am not able to "test" my typing. Credit is given to those who contributed. Special thanks to Werner Heck who was actually first up with the SG-10/15 fix.

ALL PRINTERS

by Bruce D. Kolber - JACG

The following changes can be used on all printers if desired. They are not printer specific.

Add line 581 to display "SORTING" message for a longer period when loading a disk with only a few graphics on it.

```
581 FOR DELAY=1TO150:NEXT DELAY0
```

Change lines 380, 390,400, and 410 to make it a little easier to pick the correct function.

```
380 POS.6,8:?"1. Print List of Graphics."
390 POS.6,10:?"2. Rename Graphic."
400 POS.6,12:?"3. Print Graphics and Titles."
410 POS.6,14:?"4. Display Graphic and Title."
```

Change lines 1890 and 1900 to enable DMA (Direct Memory Access). The change in sequence of commands will correct the condition of the POKE to address 559 being prematurely reset by the GRAPHICS 8 call. This change will eliminate the slight "flash" on the screen when loading screen graphics.

```
1890 GOSUB 500:GR.8:POKE 559,0:POKE 54272,0
1900 SCR=PEEK(88)+256:PEEK(89)+2414 :POKE 709,0:
POKE 710,10:POKE 708,9:GR.16+6
```

CTI PRINTER

The following change will eliminate the gap in the printed graphics while using Tom Pazel's print shop utility with CTI printers

Change line 1080 and add line 1081 as a reminder of previous setting for line spacing. make this change to the Epson version.

```
1080 PUT#1,27:PUT#1,51:PUT#1,21:REM 21/216 (14/144)
inch spacing for cti printer.
1081 REM set to 24/216 (16/144) for Epson printer.
```

SG-10/15 PRINTER

by Werner Heck - JACG

To get the Print Shop Utilities to work with the SG-10/15 printer, ten (10) lines of code have to be changed. Six (6) lines in the main program and four (4) in the menu program. Either the Epson or the Prowriter codes can be changed. I choose the Epson main program, (PSGL.EPS).

```
600 PUT#1,27:PUT#1,66:PUT#1,2:REM Elite
690 PUT#1,27:PUT#1,66:PUT#!,1:REM Pica
1080 PUT#1,27:PUT#1,65:PUT#1,8:REM 24/216 (16/144)
inch line spacing
1500 PUT#1,13
1570 PUT#1,13
1590 FOR I=1 TO 2:PUT#1,13:NEXT I
```

After these changes are made to the main program, you can save the program under a different filename such as PSGL.STR. You must then make the following changes to the menu program (file MENU).

```
100 POS.1,16:?#6;" SG-10/15"
230 IF EPSON THEN RUN "D:PSGL.STR"
270 EPSON=1:POS.1,14:?#6;">>> EPSON <<<":POS.1,
16:?#6;" SG-10/15 "
290  EPSON=0:POS1,16:?#6;">>>SG-10/15<<<":POS.1,
14:?#6" EPSON "
```

GOOD NEWS for COMPUSERVE USERS!

R. Kovacs - JACG

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▶ 17

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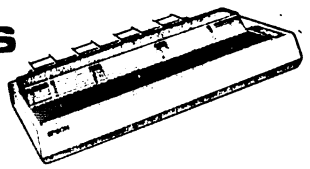

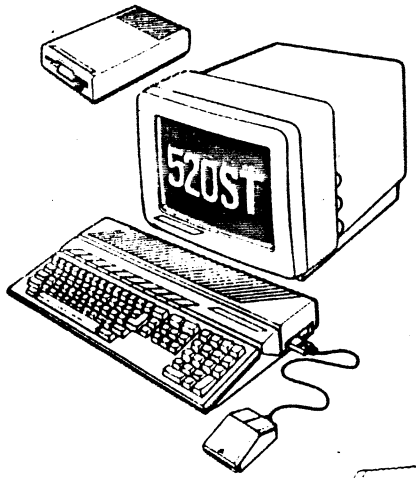

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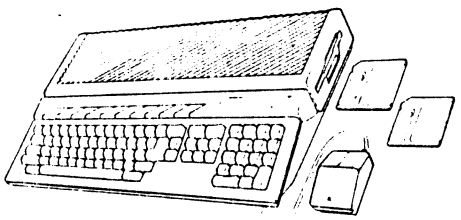
- ST Software
- Peripherals
- Cables, etc.



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"INTERLINK ST has been my terminal program of choice for several months now and I don't even have the final version yet." - ST-LOG April 1987 It has features such as:

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I'VE GOT THE POWER

Kenneth J. Pietrucha - JACG

If you have followed any of my previous ramblings, then you already know of my obsession with calculating large numbers. It gives me great pleasure to read that Pi has been extended to umpty-umpt decimal places, or that a new prime number has been discovered.

Keeping this in mind, you can imagine how disappointed I was when I tried to calculate large numbers on my computer. First of all, it came as quite a shock to find that 2 to the tenth power came out as 1023.99997 and not 1024. The second disappointment was to discover that the highest power of 2 that I could print without going into scientific notation was 2 to the 33 rd. power. I think what almost did me in was to find that 2 to the 33rd. power calculated on my computer was 8589934641, while my pocket calculator returned the more accuate answer of 8589934592. Even if I could accept scientific notation, my pocket calculator would only go to 2 to the 332 nd. power, slightly higher than I could obtain on my computer.

What I wanted was to see all the digits of 2 to the 332nd. power, all 100 of them. I wanted to be able to calculate numbers larger than my calculator or computer was capable of and to do it with 100% accuracy.

All this happened a few years ago. I refused any form of therapy and have since learned to squeeze many large numbers from my machine.

The program contained in this article was written by me and used to calculate powers of 2 large enough that the results can not be verified by a calculator. I instructed the computer to calculate and when it reached 2 to the 1000th. power to turn on the printer and print the results. It took almost two and one half hours of calculation on my Atari 800. The result was a number with 332 digits. It begins with the digits 107 and ends with the digits 376.

A sort of self checking is built into a run of powers of two. All the units digits repeat in a cycle of 2,4,8,6. If I had an error any place in the calculation, the pattern would be broken.

This was a preliminary run to check out the program and that is why I stopped it at the 1000th. power. My next assault will be to calculate 2 to the 132,049th. power and then subtract 1. The result should be a 39,751 digit prime number. It is estimated that it will take somewhere between five and seven days of calculation.

The largest number I have printed out to date, is the 2662 digit decimal equivalent of the fraction 1/14641. This calculation took only a matter of minutes. The program was a computer version of long division.

Computers have given mathematicians the irrepressible urge to expolore very large numbers. The value of Pi is already known to over sixteen million places. Such calculations are quite common and rarely take more than a day or so. Sometimes the calculation of Pi is used to check out new, super computers.

Harvey Nelson of Lawrence Livermore National Labs has calculated one million factorial (1,000,000 x 999,999 x 999,998 x ...), a number consisting of 5,565,709 digits.

Even at 5.5 million digits this is considered a small number in the realm of mathematics. In 1940, Kasner and Newman introduced the term "googol" in their book Mathematics and the Imagination. This term was meant to describe the number 1 followed by one hundred zeros, or ten to the one hundred power. In American nomenclature, the "googol" can best be described as "ten duotrigintillion".

The concept of the "googol" was further expanded to the "googolplex", a 1 followed by a googol of zeros. This number is so large, it literally can not be written out. It was best described by Isaac Asimov in his book Asimov on Numbers. The "googolplex" is so large that "you could not write the number on the entire surface of the earth if you made each zero no larger than an atom." It is equal to a trillion, trillion, repeating the word trillion one trillion times.

A recent article in Parade Magazine for May 31, 1987 gives the following information on counting large numbers at a rate of one per second. Although it takes only about seventeen minutes to count to a thousand, it would take twelve days to count to a million. A billion would take 32 years, while a trillion clocks in at 32,000 years.

With computers getting larger and faster each year, I look forward to many years of calculating larger and larger numbers.

```
10 GRAPHICS 0
15 PRINT " 2 TO THE POWER OF N"
16 PRINT
20 DIM A(1000)
30 M=0:C=0
40 D=0
50 FOR I=1 TO 1000:A(I)=0:
   NEXT I
60 A(1)=1
70 I=0:C=0
75 POKE 559,0
77 IF PEEK(53279)<>7 THEN
   POKE 559,34
80 M=M+1
90 I=I+1
100 B=A(I) + A(I) + C
110 IF B<10 THEN C=0:GOTO 140
120 B=B-10
130 C=1
140 A(I)=B
150 IF I<D THEN 90
160 IF C=1 THEN 90
165 IF M=1000 THEN POKE 838,166:
   POKE 839,238
170 PRINT M;"-";" POWER
   OF 2":PRINT
180 D=I
190 FOR N=I TO 1 STEP -1
200 PRINT A(N);
210 NEXT N
220 PRINT :PRINT
230 GOTO 70
```

Look at the program listing. Between lines 20 and 50 I set aside one thousand places and then set each equal to zero (actually I only used three hundred two places when I ran the program). I started with the number 1 in line 60 and started to double the number repeatedly. Line 100 is where the number is doubled one digit at a time and the carry from sums greater than ten are added in. The whole doubling procedure then becomes only a simple process of addition. Line 75 pokes the screen off to speed up the calculation process. If you hold any special function key down long enough, line 77 will turn the screen on temporarily so you can see how far you got in the calculation. Lastly I used a poke in line 165 to turn on the printer when I reached the 1000 th. power of 2 (this poke only works on the 800, the XL/XE series use another location). You can drop this line if you don't want a print out of the results.

The Mysterious .TTP Program

(C)1987 by Dan Rhea

via R. Kovacs - JACS

One of the more troublesome and misunderstood features on the ST computer for the novice and expert alike is the .TTP program. Currently there is something of a revolution going on in the Micro-computer industry concerning the user interface the operation system of a given machine uses. They tend to fall into two types. The Graphichs/Icon interface and the Command line interface.

The graphics/Icon interface you should be very aware of. One good example of one is GEM. Another is the one the Macintosh uses, and even the Amiga. As nice as these systems are, and as easy as they are to learn, they do have several disadvantages. One of these is, it's hard to provide information, options and data to these programs without rather sophisticated user interfaces, such as file selectors, dialog boxes, windows, and so on. These interfaces have the additional disadvantage (except in rare cases), of being very non-transportable from machine to machine. The other disadvantage in this type of interface is the difficultly in automating repetitive operations.

The other interface, is of course, the command line oriented interface. This is used by systems such as MS-DOS, CP/M, UNIX and many other operating systems. The disadvantages here are that the command syntax can be extremely verbose. If I want to copy a file from one directory to another, rather than picking it up with a mouse and dropping in it's new home, I'm forced to typing something like this:

```
A> COPY A:/WORK/USER/SOURCE/TEST.C
B:/DEVSYS/CC/CSOURCE/TEST.C
```

The advantage to this system is that had I wanted to copy all the files that ended in .C I could have entered *.C in place of SOURCE.C and any number of files could have been copied. One of the other nice features of this type of interface is that you can group commands that you tend to use repetitively into a command or script file

that can be invoked simply by typing its name. The last nice thing about this sort of interface is that most of them allow you to use what is called I/O re-direction. This is where the output that would normally go to your screen could be sent to a file for further processing.

Not to bad eh? Wish we could do it too don't you? C'mon admit it. Well, you can! And you need not look any farther than the .TTP feature provided by TOS. TTP actually stands for: "Tos Takes Parameters". In simpler terms, a command line interface! See, it was there all the time. Just like the Amiga with its CLI, we have our own compromise in TTP. One thing you need to understand though, is that TTP is not a complete command line interface, but it is enough that it gives us compatibility with literally thousands of programs that use a command line interface. All these programs need in most cases is to be re-compiled and re-linked on the ST; and they run just like they did on the machine they were written on.

In brief, TTP will allow you to pass parameters (filenames and options), into a program and re-direct I/O from a program. It does not, unfortunately, handle expansions of wildcards. For that you need one of the several available tools for the ST like David Beckemeyers Micro C-Shell or MT C-Shell or one of the several fine Public Domain command shells that are available for the ST.

Now for a live (well sort of live), demonstration of what I'm talking about. The following program is one I wrote that I currently have running on 5 different computers on nearly as many different operating systems. I was able to get this program to run on the ST with the simple addition of one option. The option keeps the program from returning directly back to the desktop once it has completed. It will also illustrate the use of the C constructs argc and argv in processing arguments presented to us via the command line. In the case of TTP that is the line in the Open Application dialog box.

This program basically counts all the lines, characters, and words in a file or a set of files; and if more than one file is processed it produces total statistics. This can be handy for programmers or writers who would like to keep track of their productivity (or lack of same). The program is highly modified but is based on the program WC by Brian Kerninghsn and P.J. Plauger in their book: Software Tools, Addison Wesley, 1976. The birthplace of such tools as CAT, DIFF, GREP, LPR, MORE and so on.

KOUNT count lines, words and chars with/without newlines in files supplied via command line, and produce an individual file and total of all files report. The program is a modification of the WC program by Kerninghan and Ritchie. It is by Dan Rhea, and it is in the Public Domain. ▶

```
    Usage: KOUNT [-H]
fil1[fil2[filn...]]
#include "tosdefs.h"
#include "osbind.h"
#include "stdio.h"
main(argc, argv)
/*
** Parameter definitions (command line)
*/
char *argv[];      /* argv - argument vector (pointer)
*/

int   argc;          /*  argc  -  argument  counter
*/
{
   /*
   ** Variable declarations
   */
   FILE     *fp,           /*          File     Stream
*/
        *fopen();     /*        File     open     routine
*/
   char  *next;      /*       next  argument  character
*/
   long  int   l,        /*   l    =   lines   found
*/
        c,            /*   c    =   characters   found
*/
        n,           /*  n   =   characters   found   w/nl
*/
        w,            /*    w     =     words     found
*/
        i,            /*   i    =   file(s)    counted
*/
        lt,           /*  lt   =  total   lines   found
*/
        ct,          /*  ct  =  total  characters  found
*/
        nt,         /* nt = total characters found w/nl
*/
        wt,           /*  wt   =  total  words   found
*/
        t,          /* t  = files from command line count
*/
        igot;            /*          console       input
*/
   int   f,           /*   f    =   transition   flag
*/
        s,            /*    s     =     shell      flag
*/
        d;            /*   d    =   current   character
*/
   /*
   ** Initialize the variables
   */
   f = NO;
   s = YES;
   l = c = n = w = lt = ct = nt = wt = t = i = 0;
   /*
   ** Check for arguments, if none explain how we work and
quit
```

```
   */
   if (argc <= 1) [                    /* Error if no
arguments */
      printf ("\007\007");             /* Ding! */
      printf ("usage:  KOUNT  [-H]  file1  [file2
[...filen]]\n");
      printf ("      -H indicates hold for a keypress at
EOJ\n");
      printf ("Press any key to continue.");
      igot = Cconin ();

     printf ("\n");
     exit (0);
   ]
   /*
   ** Take care of introductions and let em' know this is
PD
   */
   printf ("KOUNT 1.04 03/15/87 by Dan Rhea. Public
Domain.\n\n");
   /*
   ** Now start grabbing filenames from the command line
and
   ** decrement the command line argument counter as we go

   */
   while (--argc > 0) [                /* if present grab
argument */
      /*
      ** Bump the file counter and open the file (assume
we have
      ** a file not a command option), also point to the
next
      ** command line argument
      */
      ++i;
      if ((fp = fopen(*++argv, "r")) <= 0) [
         /*
         ** If we couldn't open it, tell the user, back up
the
         ** file count and jump to the next file. Also is
a -H
         ** is there than we aren't in a shell so just set
a
         ** flag but show no error
         */
         if ((*argv)[0] == '-') [
            next = argv[0]+1;
            if ((*next == 'H') || (*next == 'h'))
               s = NO;
            else [
               printf ("\007\007Error:");    /* Ding! */
               printf (" Invalid option: %c.\n",*next);
            ]
         ]
         else [
            printf ("\007\007Error:");       /* Ding! */
            printf ("  Unable to open %s.  fp =
%ld.\n",*argv,fp);
         ]
         --i;
         continue;
      ]
      /*
      ** Scan the file till we hit EOF
      */
      while ((d = getc(fp)) != EOF) [
         /*
         ** Count the characters
         */

         if (d != '\n') [
            ++c, ++n, ++ct, ++nt;
         ]
         /*
         ** Count the lines
         */
         else if (d == '\n') [
            ++l, ++n, ++lt, ++nt;
         ]
         /*
         ** Check for the end of a word and count it if we
think
         ** we found one (end of a word is a newline, a
tab or
         ** any white space).
         */
         if (d == ' ' || d == '\n' || d == '\t')
            f = NO;
         else if (f == NO) [
            f = YES, ++w, ++wt;
         ]
      ]
      /*
      ** Show the totals for this file (if we found
anything)
      ** then close the file and prepare for the next
victim
      */
      if (l != 0) [
         printf ("%-12s: ",*argv);
         printf ("%10ld L, %10ld W, ",l,w);
         printf ("%10ld C, %10ld C+nl.\n",c,n);
         l = c = n = w = 0;
         ++t;
         fclose (fp);
      ]
   ]
   /*
   ** if more than one file was counted than show the
grand
   ** totals. Then hang around till the user hits a key
before
   ** returning to desktop or shell if -H was selected
   */
   if (t > 1) [
      printf ("%6ld Files: ",i);
      printf ("%10ld L, %10ld W, ",lt,wt);
      printf ("%10ld C, %10ld C+nl.\n",ct,nt);
   ]
   if (s == NO) [
```

```
    printf ("\nPress any key to continue.");
    igot = Cconin ();
    printf ("\n");
  ]
] /* The end of the KOUNT program! */
```

And here is a sample of the output produced by the program using
the open application command line with the following input:

```
-h kount.c x.c elvert.c lookse.c >fil

KOUNT 1.04 03/15/87 by Dan Rhea. Public Domain.

KOUNT.C    :       186 L,       773 W,       5073 C,
5259 C+nl.
Error: Unable to open X.C. fp = 0.
ELVERT.C   :       910 L,      4105 W,      29716 C,
30626 C+nl.
LOOKSE.C   :        66 L,       303 W,       2068 C,
2134 C+nl.
    3 Files:      1162 L,      5181 W,      36857 C,
38019 C+nl.

Press any key to continue.
```

You might notice the >fil in the command line above. That is an example of I/O redirection in a TTP program. I used it to send the output of KOUNT.TPP that normally gets sent to the screen, to a disk file called FIL that I was then able to include with this article. One final limitation of the TTP interface that you might want to keep in mind is that it provides a very limited amount of space on the command line. The one I entered above is just about as long as is practical. If you need longer command lines then you need to obtain one of the command shells mentioned above.

I hope this took care of a little bit of the confusion surrounding the TTP type programs. If there is sufficient interest, next month I will try to de-mystify that other bit of ST arcanea, The .ARC file and its companion ARC.TTP.

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The JACG Zmag Articles
Part II

Zmag is a weekly publication of Syndicate Services, located in Middlesex, NJ. Ron Kovacs, the SysOp of the Syndicate Bulletin Board System, edits the newsletter, which is distributed nationwide to computer Bulletin Boards such as our own JACG BBS, and to information services such as CompuServe and GEnie.

The Jersey Atari Computer Group was selected as the Zmag User Group of the Month for May, 1987. Articles by JACG members appeared in the May issues of Zmag. This month, we reprint the third and fourth JACG Zmag articles, which originally appeared in Zmag #52 and #54, repectively.

---

(201) 298-0161

You have reached the NEW JACG BBS, the official Bulletin Board System of the Jersey Atari Computer Group, located in beautiful downtown Roselle (first village lighted by electricity), New Jersey.

Hi, my name is Mark Knutsen, and I'm one of the three SysOps who service the JACG BBS and aid its callers.

A club as large as the Jersey Atari Computer Group needs a good BBS, to link the club members together, and to advertise the club to the world. The JACG BBS has had several

incarnations over the years, as various SysOps have come and gone. As late as mid-1986, SysOp Scott Brause was running the board out of his home, using the BBCS software that he authored and sold through Antic's Catalog. When Scott left the state to attend school, the BBS needed a new home. Scott and Eric Jacoves served a brief stint as SysOps, running a Carina system. Then, one day in October (or was it November?) of last year, I received a call from the then-President of our club, Joe Kennedy. "Would you like to be our new SysOp?" "Sure," I said, "why not?" Should've known...

You see, I'm a college student, and running a Bulletin Board System for a large organization out of a dormitory room simply doesn't work, especially when one has two roommates, only one

phone line, and a phone number that will change every May. If this setup was to work, the actual BBS hardware would have to be elsewhere. I spent over a month searching for a location before I discovered that Gary Gorski, our club's Advertising/Sales Manager, had moved to Roselle, just a few blocks from my home. He was ready and willing to take on yet another job for the club, and so one of my problems was solved.

At about the same time, a decision was made to use one of the club's 16-bit machines to run the BBS, in the hope of providing a faster, more powerful system to the users. This meant a search for software, as the STs have not been around as long as the 8-bitters, and the range of BBS software to choose from is limited.

An ad in the December '86 issue of Analog magazine intrigued me, and I gave Quantum Microsystems, Inc. a call regarding their new "BB/ST" software. It turned out that I was one of the first to inquire, and the JACG BBS became the very first end-user beta-test site for BB/ST. Only one problem now remained. How was I, attending Rutgers University New Jersey, to regularly call the new BBS in Roselle without draining my bank account to pay long-distance charges?

The amazing PC Pursuit service came to the rescue here.

The system was put on-line in mid-January of this year, running BB/ST version 1.00 on a 520ST with one single-sided drive and a Hayes Smartmodem 1200. Gary and I were soon joined by JACG 16-bit Vice President Tom Shoosmith, who brought his ST expertise and computer programming know how to the team of SysOps. Together, we weathered the first few rough months of system crashes and bug fixes to the still-developing software.

Today, BB/ST is in version 1.03, and is becoming very well-behaved. An SH204 20-megabyte hard drive has been added to the system, and the number of messages, callers, and download files increases daily. Thanks are due to the JACG Executive Board for having the faith to invest club funds in this new, ST-based venture, and especially to Gary Gorski and Tom Shoosmith, for the many long hours that they spend attending to the system. Without people like them, a computer Bulletin Board cannot survive.

Of course, the JACG BBS is a ZMAG board, and is also (surprise) accessible via Telenet's PC Pursuit service. Why not give us a call? Your suggestions for, comments on, and questions about BB/ST are especially encouraged. Our number, again, is (201)298-0161.

...and when you call, don't forget to tell us, "I read about it in Zmag!"

////Part II////

As 8-Bit Vice-President of the Jersey Atari Computer Group I try to provide good representation for our membership ... especially our 8-Bit membership. My name is Doug Van Hook, and I'm just one of the members on the JACG production line. The production line produces Quality Meetings, a state of the art Bulletin Board, an Award Winning Newsletter, and a Disk Library bulging with the latest 8-Bit and 16-Bit Public Domain Software.

A large part of my job is to convince members, friends, and software producers to demonstrate software or speak at our meetings. We like to give our members the chance to see or hear about software products before they buy them. This is especially true with Public Domain Software.

If you've read our newsletter, you may have seen my column PDG (Public Domain Goods). Head Disk Librarian Sam Corey and I try to select the best public domain software available as our featured disk for the month. We have exchanged complete disk libraries with other clubs to provide enough EXCEPTIONAL 8-Bit and 16-bit disks.

I also demonstrate the featured 8-Bit disk at our monthly meeting. The result has been a surge in disk sales, and more importantly, confidence and pride in our disk library. I don't deny that there are still some really bad disks in our library which we don't censor. BUT... we don't feature them!

Oh... the disk of the month is available during the month featured for $3.00 instead of the usual $5.00. This applies to all featured disks whether they have programs on one or both sides. To order our disk of the month just write to our MAIL ORDER LIBRARIAN:

Bret Calligari
306 Division St. Floor 2
Boonton, NJ 07005

For other Atari Groups interested in exchanging libraries please contact:

Sam Cory
P.O. Box 7
Towaco, NJ 07082

If you want to read the latest Atari news and reviews, download YOUR copy of Zmag from the Syndicate BBS in Middlesex, New Jersey (phone (201)968-8148), or the JACG BBS in Roselle, New Jersey (phone (201)298-0161). Also available now are the current issues of the monthly Zmag ST Report!

Remember, receiving the JACG Newsletter is just one of the many benefits of being a member of JACG.

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1. Fill out a membership renewal form in the front lobby before our monthly meeting and present it with $25 (in cash or check) to the Treasurer. Add $6 for first class mailing of the newsletter.

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